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REMARKS

This Response is offered in reply to the office action of July 21, 2003. A petition and fee for a one month time extension are enclosed.

On page 2 of the office action, claims 1-3, 5, 11, 13, 26, 37, 39, 40, 41, 42, and 46 are rejected under 35 USC 102(b) or 103(a) over WO 88/00511 (hereafter WO reference).

Applicant believes the pending claims are allowable over the WO reference. Firstly, the abstract of the WO reference describes a machine tool having a spindle motor with an output shaft 10 for rotating a spindle. The output shaft 10 includes a toothed plate 12 and a toothed plate 14 that cooperate with rotational speed sensing element 16 and rotational position sensing element 18 for detecting rotational speed and rotational position of the output shaft 10.

Secondly, as pointed out in Applicant's previously-filed response, the WO reference involves a machine tool spindle which is rotated by a spindle motor via output shaft 10. The WO reference does not disclose or suggest Applicant's claimed monitoring device having a pivotal checking element for checking for a predefined position or presence of a body. This element of Applicant's claim 1 is not disclosed or rendered obvious in view of the WO reference.

On page 2 of the office action, the examiner alleges that the WO reference "teaches a device, including: checking element 14, motor, and power supply to power the motor". The examiner is believed to be incorrect in making this allegation since the element 14 of the WO reference is in fact referred to as a "toothed plate 14" in the English Abstract and not a pivotal checking element for checking for a predefined position or presence of a body.

Thirdly, the WO reference discloses a sensing device for detecting the rotational speed and rotational position of the output shaft 10.

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The WO reference fails to disclose or suggest Applicant's monitoring device of pending claim 1 that in addition to the recited pivotal checking element, further includes a motor for driving the checking element via a shaft and a control device for controlling the motor to control the pivotal movement of the checking element; wherein the control device specifies the pivotal position of the checking element in dependence on the time, wherein the pivotal position of the checking element relative to a starting position is known at every time in the pivotal movement of said checking element, and wherein the control device includes a control loop for controlling pivotal movement of the checking element in accordance with a predefined pivotal position-time course such that the checking element is positioned at any location along the position-time course at a predefined time independent of any frictional moment exerted on the shaft.

The WO reference thus fails firstly to disclose or suggest a monitoring device having a pivotal checking element for checking for a predefined position or presence of a body, and secondly a monitoring device having a control device for controlling the pivotal movement of a checking element in the manner recited in pending claim 1.

The same is true of each of depending claims 2-3, 5, 11, 13, 26, 37, 39, 40, 41, 42, and 46. The features of these claims are not disclosed by or suggested in the WO reference as pointed out in Applicant's previously-filed response, which is incorporated herein by reference for convenience.

With respect to claims 1, 11, and 26, the examiner alleges on page 2, fourth paragraph that the WO reference suggests that position detection has use for control with an example being a feedback to control position of the shaft. The examiner's allegation appears to be based on a hindsight analysis of Applicant's pending claim since there is no disclosure in the WO reference of the features of claims 1, 11 and 26. Moreover, there is no disclosure in the WO reference of a control device wherein the control device specifies the pivotal position of the checking element in dependence on the time, wherein the pivotal position of the checking element relative to a starting position is known at every time in the

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pivotal movement of said checking element, and wherein the control device includes a control loop for controlling pivotal movement of the checking element in accordance with a predefined pivotal position-time course such that the checking element is positioned at any location along the position-time course at a predefined time independent of any frictional moment exerted on the shaft.

With respect to pending claims 3, 5, and 13, the examiner argues that the application of a motor with a machine tool (Fig. 2 of the WO reference) infers some level of automation in the tool's use. Applicant's believe this is a wholly inadequate basis for rejecting the features set forth in claims 3, 5, and 13, amounting to a prohibited hindsight analysis of the claims.

With respect to pending claims 37, 39, 40, 41, 42, and 46, the examiner refers to element 28 between bearing 32 and housing 22 of the WO reference. However, Applicant notes that the element 28 is fastened by screws (one shown at the upper right hand corner of drawing sheet 1/3-Fig. 1 of the reference) in a manner that suggests it is a structural member similar to member 42 of the spindle, rather than a seal as set forth in Applicant's claims 37, 39, 40, 41, 42, and 46. Moreover, with respect to claim 46 which recites a relationship between the outer diameter of the seal and the checking element, the WO reference does not disclose or suggest Applicant's pivotal checking element as pointed out by Applicant's above.

Reconsideration of the rejection of pending claims 1, 3, 5, 11, 13, 26, 37, 39, 40, 41, 42, and 46 is requested.

On page 2 (near the bottom) of the office action, claims 6-8, 10, 14, 15, 16-19, 20, 23, and 34 are rejected under 35 USC 103(a) as obvious in view of WO 88/00511.

As pointed out above, the WO reference involves a machine tool spindle which is rotated by a spindle motor via output shaft 10 and not a monitoring device having a pivotal checking element for checking for a predefined position or presence of a body as set forth in Applicant's claims. The WO reference does not disclose or suggest Applicant's claimed monitoring device having such a pivotal checking element to this end.

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Moreover, the examiner's argument at the bottom of page 2 through top of page 3 regarding machine tools requiring automated systems and regarding working times for machine tools under automated circumstances being fixed is believed without merit. Firstly, Applicant's claims are directed at a monitoring device for checking for a predefined position of a body or for checking for the presence of a body and Applicant has provided features of claims 6-8, 10, 14, 15, 16-19, 20, 23, and 34 in such a monitoring device.

Secondly, the WO reference discloses a sensing device for detecting the rotational speed and rotational position of the output shaft 10 of a spindle, but fails to disclose or suggest Applicant's claimed features of claims 6-8; namely, a fixed time recited for movement between positions of the recited pivotal checking element set forth in these claims. The same is true of the predefined position-time curve and control value of a time increment for the pivotal checking element as set forth in claims 9 and 10, respectively. The same is true with respect to features of claims 14-20 and 23 of Applicant's monitoring device that is not suggested by the WO reference. Claim 34 recites stop features of Applicant's monitoring device that are not suggested by the WO reference.

Reconsideration of the rejection of claims 6-8, 10, 14, 15, 16-19, 20, 23, and 34.

On page 3 of the office action, claims 1-3, 5-11, 13, 14, 18, 26, and 34 are rejected under 35 USC 102(e) or 103(a) over the Huber US Patent 6 130 516 (hereafter '516 patent). The examiner alleges that the '516 patent teaches a checking element 32, 34, motor 20 and control 44 wherein the control device relates position with respect to encoder 38 wherein the position of the checking element relative to a "zero position" is measured during pivoting.

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Applicant would point out that the '516 patent does not disclose or suggest a monitoring device for checking for a predefined position of a body or for checking for the presence of a body, comprising a pivotal checking element, a motor for driving the checking element via a shaft; and a control device for controlling the motor to control the pivotal movement of the checking element, wherein the control device specifies the pivotal position of the checking element in dependence on the time, wherein the pivotal position of the checking element relative to a starting position is known at every time in the pivotal movement of said checking element, and wherein the control device includes a control loop for controlling pivotal movement of the checking element in accordance with a predefined pivotal position-time course such that the checking element is positioned at any location along the position-time course at a predefined time independent of any frictional moment exerted on the shaft.

The '516 patent only states that the microcomputer 44 steers the electric motor first in one direction of rotation such that a feeler pin strikes a first object as stated at column 3, lines 35-37 and then in a reverse direction such that a feeler pin strikes a second object (column 3, lines 35-45), whereby first and second angular positions are established. A zero position of the feeler pin is determined as the center of the first and second angular positions and the pivoting angle determined by the shaft encoder 38.

There is no disclosure or suggestion in the '516 patent of a control device that includes a control loop that specifies the pivotal position of the checking element in dependence on the time in accordance with a predefined pivotal position-time course such that the checking element is positioned at any location along the position-time course at a predefined time independent of any frictional moment exerted on the shaft. as set forth in pending claim 1. The '516 patent is utterly silent in these regards.

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Applicant acknowledges the indicated allowable subject matter of claims 12, 21, 22, 24, 27-33, 35, 36, 38, 43-35, and 47-53 as set forth on page 5 of the office action. Applicant has not rewritten these claims as they are believed to depend from allowable claims.

Applicant believes the pending claims are in allowable condition, and action to that end is requested.

Applicant encloses Terminal Disclaimers (2) and fee therefor to obviate any issue of obviousness type double patenting with respect to the claims of copending applications Serial Nos. 09/758,513 and 09/758,515 listed in Applicant's previously submitted Supplemental IDS, which the examiner has made of record herein. Favorable consideration of the Terminal Disclaimer is requested.

Respectfully submitted,



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Enclosure: Terminal Disclaimers (2) with fees and Postal Card

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service under 37 CFR 1.8 as first class mail in an envelope addressed to: Commissioner For Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on November 20, 2003.



Edward J. Timmer